VIGNAUD, H. Americ Vespuce, ses voyages et ses découvertes devant la critique. *Journ. Soc. des Américan. de Paris*, Vol. 8, 1911, Fasc. 1–2, pp. 75–115.

METHODOLOGY AND TEACHING

FAWCETT, C. B. On the Teaching of the Cycle of Land Forms. Ills. *Geogr. Teacher*, No. 35, Vol. 7, 1913, Part 1, pp. 19–28.

GENERAL

HESS, F. L., AND E. HESS. Bibliography of the Geology and Mineralogy of Tin. 408 pp. *Smithson. Miscell. Coll.*, Vol. 58, 1912, No. 2.

SCHIARINI, P. X Congresso Geografico Internazionale (Roma 27 marzo-3 aprile 1913). Riassunto sommario del socio-. [Summary Report.] *Boll. Reale Soc. Geogr.*, Serie 5, Vol. 2, 1913, No. 4, pp. 395–429. Rome.

—— The Contents of the Publications of the Imperial Earthquake Investigation Committee. 29 pp. Tokyo, 1913.

NEW MAPS

EDITED BY THE ASSISTANT EDITOR

For system of listing maps see p. 75 of this volume

MAPS ISSUED BY UNITED STATES GOVERNMENT BUREAUS

U. S. GEOLOGICAL SURVEY

Maps Accompanying Publications

Alaska. (a) Reconnaissance Map of the Iliamna Region, Alaska. Triangulation and topography by D. C. Witherspoon and C. E. Giffin. Surveyed in 1909. 1:250,000. 60°35′ - 59°13′ N.; 156°20′ - 152°30′ W. 2 colors.

(b) Geologic Reconnaissance Map of the Iliamna Region, Alaska. Geology by G. C. Martin and F. J. Katz, assisted by Theodore Chapin. Surveyed in 1909. Same scale and coordinates as map (a). 20 colors.

(c) Map showing Distribution of Forests in the Iliamna Region. [1:940,000]. Same coordinates as map (a).

(d) Map showing observed distribution of the higher gravels southeast of Lake Clark. [1:380,160]. 60°17′ - 59°46′ N.; 154°50′ - 154°10′ W.

Accompany, as Pls. I, II and IV and Fig. 3, respectively, "A Geologic Reconnaissance of the Iliamna Region, Alaska," by G. C. Martin and F. J. Katz, *Bull. 485*, 1912.

[Important maps of the region at the base of the Alaska Peninsula. Topography on map (a); relief in contours, interval 200 ft.]

Alaska. (a) Map of Central Alaska, showing Position of the Coal Fields. Compiled from maps by U. S. Geological Survey. 1912. 1:2,500,000. 67° - 59° N.; 156° - 140° W. 5 colors.

(b) Geologic Reconnaissance Map of the Matanuska Valley, Alaska. Compiled from surveys by F. J. Katz, Adolph Knopf, G. C. Martin, and Sidney Paige. Topographic base by T. G. Gerdine and R. H. Sargent. 1912. 1:250,000. 62°25′ - 61°15′ N.; 150°8′ - 147°12′ W. 15 colors.

(c) Topographic Map of the Lower Matanuska Valley, Alaska. 1912. Topography by R. H. Sargent. Surveyed in 1909. 1:62,500. 61°52.5′ - 61°39.0′ N.; 149°10′ - 148°20′ W. 3 colors.

(d) Geologic Map of the Lower Matanuska Valley, Alaska. 1912. Geology by G. C. Martin, F. J. Katz, and Theodore Chapin. Surveyed in 1910. Same scale and coordinates as map (c). 18 colors.

(e) Map of the Lower Matanuska Valley, Alaska, showing coal areas, location of the coal sections and localities from which samples were taken. 1912. Same scale and coordinates as map (c). 7 colors.

Accompany, as Pls. I, III, IV, V and XVIII, respectively, "Geology and Coal Fields of the Lower Matanuska Valley, Alaska," by G. C. Martin and F. J. Katz, *Bull. 500*, 1912.

[Map (a) helpful general map showing large physical divisions; relief in shading. Map (b) important map on relatively large scale of entire Matanuska Valley from Knik Arm to the western edge of the Copper River Plateau. Relief on maps (b) to (c) in contours; interval on map (b), 200 ft., on maps (c) to (e), 50 ft. On map (c) distinction made between (1) areas of high-grade bituminous coal, (2) areas of low-grade bituminous coal, (3) possible extension of low-grade bituminous coal.]

Nevada. (a) General Geologic Map showing Relative Position of the Jarbidge, Contact, and Elk Mountain Mining Districts, Nevada. By F. C. Schrader. 1:312,500. 42°0′ - 41°36′ N.; 115°32′ - 114°30′ W. 5 colors.

(b) Geologic Reconnaissance Map and Section of the Jarbidge Mining District, Elko County, Nevada. Topography by R. D. Pickett. Geology by F. C. Schrader. 1:125,000. 41°56′ - 41°46′ N.; 115°32′ - 115°16′ W. 7 colors.

(c) Geologic Reconnaissance Map and Sections of Contact District, Nevada. Topography by Nelson W. Sweetser. Geology by F. C. Schrader. 1:125,000. 41°53′ - 41°37′ N.; 114°56′ - 114°30′ W. 6 colors.

Accompany, as Pls. I, II and XIV, respectively, "A Reconnaissance of the Jarbidge, Contact, and Elk Mountain Mining Districts, Elko County, Nevada," by F. C. Schrader, *Bull. 497*, 1912.

[Region lies in extreme northeastern corner of Nevada on divide between the Great Basin and the Snake River Basin. Topography shown on maps (b) and (c) by contours; interval 400 ft. and 200 ft., respectively.]

United States. Map showing Condition of Astronomic Location and Primary Control to January 1, 1911. [1:15,000,000]. 3 colors. Accompanies, as Plate I, "Results of Triangulation and Primary Traverse for the Years 1909 and 1910," by R. B. Marshall, *Bull. 496*, 1912.

[Areas controlled by triangulation or traverse shown in buff, astronomic stations indicated by red triangles.]

NORTH AMERICA

United States

Arizona. Réseau hydrographique de la Salt River, dans les Superstition Mountains . . . d'après la carte du Reclamation Service. 1:450,000. 33°50′ - 33°27′ N.; 111°42′ - 110°58′ W. Accompanies, as Fig. 1 on page 199, "La Région de Phœnix (Arizona) et le Barrage Roosevelt," by A. Vacher, *Ann. de Géogr.*, Vol. 22, 1913 (March 15), pp. 197–208.

Utah. Partie Nord-Ouest de l'Utah. 1:1,500,000. 41°50′ - 39°40′ N.; 113°10′ - 110°25′ W. Accompanies, as Fig. 1 on p. 187, "L'Utah," by L. Gallois, *Ann. de Géogr.*, Vol. 22, 1913 (March 15), pp. 185–196.

[Relief very expressive.]

Washington. Seattle en 1912. 1:200,000. [47°33′ N. and 122°20′ W.] Accompanies, as Fig. 1 on p. 166, "Les Ports Americains du Nord-Ouest," by F. Herbette, *Ann. de Géogr.*, Vol. 22, 1913 (March 15), pp. 160–171.

[Distinguishes between business and residential section, and shows filled-in land.]

Mexico

Mexico. Carta de la República Mexicana à la 100,000a. [Ten sheets, 1:100,000 (oriented N. 2½° E. to N. 4½° E.; 4 colors), enumerated in meridional strips proceeding from west to east:] (1) Hoja 5–II–(G). 30°35′ - 30°32′ N.; 108°14′ - 107°39′ W. 1911. (2) Hoja 5–II–(C). 30°59′ - 30°36′ N.; 107°43′ - 107°8′ W.

1911. (3) Hoja 5–II–(M). 30°15′ - 29°52′ N.; 107°39′ - 107°3′ W. 1911. (4) Hoja 5–II–(D). 31°0′ - 30°37′ N.; 107°10′ - 106°35′ W. 1911. (5) Hoja 5–II–(I). 30°38′ - 30°16′ N.; 107°8′ - 106°34′ W. 1911. (6) Hoja 5–II–(N). 30°17′ - 29°54′ N.; 107°6 - 106°32′ N. 1911. (7) Hoja 6–I–(B). 31°4′ - 30°42′ N.; 105°30′ - 104°56′ W. 1911. (8) Hoja 6–I–(L). 30°21′ - 29°58′ N.; 105°27′ - 104°53′ W. 1911. (9) Hoja 6–I–(H). 30°44′ - 30°21′ N.; 104°55′ - 104°22′ W. 1911. (10) Hoja 6–I–(R). 30°0′ - 29°38′ N.; 104°53′ - 104°19′ W. 1911. Comisión Geográfica de Guerra y Fomento, Mexico.

[Sheets of the official map of Mexico. Each sheet is a rectangle whose limits do not coincide with parallels and meridians, the projection having been laid out for the whole of Mexico as a unit. Each sheet is designated according to its position within the sheets of an edition on the scale of 1:500,000 (none of which has been issued, however). These sheets are conceived to be divided into 25 rectangles—5 each in the horizontal and vertical rows—which are designated by letter, beginning with A in the upper left hand corner and continuing in the usual sequence of the printed page. The Roman numerals refer to the four sheets which are conceived to constitute one sheet of an edition on the scale of 1:1,000,000 (none published), to which the Arabic number refers.

Relief is shown in somewhat generalized contours in dark brown (interval 50 meters), drainage in blue, towns in red and roads in light brown. On each sheet there is a diagram showing by whom the various routes were traversed; also a table of the positions determined astronomically. The ten sheets listed above all lie in Chihuahua. The parts of sheets 6–I–(B), 6–I–(H), and 6–I–(R) lying east of the Rio Grande are blank.]

SOUTH AMERICA

Bolivia. Reisen in den Ostkordilleren von Bolivien. Nach eigenen Aufnahmen von Dr. Theodor Herzog. [Three maps, entitled:] (1) Übersicht der Bolivischen Ostkordillere. 1:1,500,000. 16°35′ - 18°50′ S.; [67°5′ - 63°10′ W.]. 2 colors. (2) Reiseweg von Nordargentinien nach Santa Cruz. 1:1,500,000. 17½° - 22⅖° S.; [63°35′ - 62°40′ W.]. 2 colors. (3) Die Quimzacruz Kordillere. 1:200,000. 16°40′ - 17°6′ S.; [67°30′ - 67°3′ W. approx.]. 3 colors. Accompanies, as Taf. 30, "Die bolivischen Kordilleren" (first part), by T. Herzog, *Pet. Mitt.*, Vol. 59, I, 1913, April, pp. 192–195.

[Map (1) a general map showing the arrangement of the ranges by diagrammatic crest lines. Map (2) shows the author's route along the eastern foot of the Andes. Map (3) is an important original map on a relatively large scale of the ill-known range which continues the Illampu-Illimani Range to the southeast beyond the transverse valley of the Rio de la Paz. Relief in contours and shading; contours of usual slopes in brown, rock contours in black, glacier contours in blue.]

AFRICA

Egypt. Das Gebiet zwischen Assuan, Kurkur und dem Gebel Borga. Aufgenommen von Dr. Kurt Leuchs mit Benutzung der Ball'schen Aufnahmen. 1:250,000. 24°26′ - 23°49′ N.; 32°14′ - 32°56′ E. 2 colors. Accompanies, as Taf. 28, "Eine Reise in der südlichen Libyschen Wüste: Gebel Garra, Oase Kurkur, Gebel Borga," by K. Leuchs, *Pet. Mitt.*, Vol. 59, I, 1913, April, pp. 190–191.

German Southwest Africa. Übersichtskarte des meteorologischen Beobachtungswesens von Deutsch-Südwestafrika im Beobachtungsjahr 1910–11. 1:2,000,000. 17°4′ - 29°0′ S.; 11° - 21½° E. 3 colors. With inset: ["Caprivizipfel"]. Same scale. 17°45′ - 18°23′ S.; 21°0′ - 25°10′ E. 3 colors. Accompanies, as Karte 4, "Jahresbericht über das meteorologische Beobachtungswesen im südwestafrikanischen Schutzgebiet für die Zeit vom 1. Juli 1910 bis 30. Juni 1911," *Mitt. aus den Deutschen Schutzgeb.*, Vol. 25, 1912, No. 1, pp. 56–71.

[Distinguishes between meteorological stations of the second order, expanded rainfall stations, normal rainfall stations and stations furnished with rain gauges with intermittent or recent records only.]

Sahara. Itinéraires de la mission d'étude du Transafricain. 1:15,000,000. 28° - 12° S.; 2° W. - 13½° E. Accompanies, as Fig. 15 on p. 111, "La Mission d'Étude du Transafricain," by J. Niéger, *La Géogr.*, Vol. 27, 1910, No. 2, pp. 109–115.

AUSTRALASIA AND OCEANIA

Kaiser-Wilhelmsland. Die Südostecke von Kaiser-Wilhelmsland. Nach den astronom. Ortsbestimmungen u. Vermessungen der Kommissare der deutsch-englischen Grenzexpedition (1908–1909), Mr. Sabine, Hauptm. Foerster, Bergassessor Stollé, den Wegeaufnahmen des Landmessers Wernicke u. Stationsleiters Kling und der Deutschen Admiralitätskarte No. 515 bearbeitet von M. Moisel, gezeichnet von H. Ketzer. 1:300,000. 7°20′ - 8°9′ S.; 146°51′ - 148°5′ E. 4 colors. Accompanies, as Karte 5, "Bericht über die Arbeiten des Hauptmanns Foerster bei Gelegenheit der Grenzfestsetzung von Kaiser-Wilhelmsland im Verlauf des 8. Grades südlicher Breite," *Mitt. aus den Deutschen Schutzgeb.*, Vol. 25, 1912, No. 1, pp. 72–74.

[Valuable map on a relatively large scale of the extreme southeastern corner of German New Guinea, embracing the results of the British-German boundary survey.]

EUROPE

Balkan Peninsula. (a) Map showing the distribution and mingling of races in the west of Turkey in Europe. [1:2,000,000]. [43°45′ - 40°30′ N.; 19°10′ - 24°45′ E.] 4 colors.

(b) Sketch Map showing the General Course of the Operations in the Balkan War. [1:3,000,000]. 44° - 38⅔° N.; 18⅓ - 29⅓° E. 2 colors.

(c) Battle of Kirk Kilisse, 23rd–24th October 1912. [1:190,000]. [41°58′ - 41°35′ N.; 27°0′ - 27°35′ E.] 3 colors.

(d) The Campaign in Thrace. [1:1,000,000]. [42°30′ - 40°30′ N.; 25°20′ - 29°20′ E.] 2 colors.

(e) The Fighting at the Chatalja Line on Nov. 17–23. [1:200,000]. [41°28′ - 40°57′ N.; 28°20′ - 28°47′ E.] 2 colors.

(f) The Siege of Adrianople. [1:137,000]. [41°46′ - 41°34′ N.; 26°26′ - 26°41′ E.] 2 colors.

Accompany, facing pp. 88, 134, 152, 178, 184 and 214, respectively, "With the Victorious Bulgarians," by H. Wagner, Boston and New York, 1913.

[Maps (b) to (f) valuable maps showing the military operations of the Balkan War. Maps (b) and (d) are of general scope. Map (a) extends Bulgarian nationality farther west (up to the Morava and Ochrida Lake) than does Cvijić's standard map reviewed in the June *Bull.*, pp. 479–480. The failure to color the eastern, Bulgarian, part of the map might lead to confusion, as white is the symbol used for the Servians. All traces of the Austrian origin of the map have not been eliminated, as witness "Hochfläche von Kumanovo," "Golf v. Rendina o. Orfano," etc.]

Germany. (a) [Four maps, 1:900,000, bounded by 50°52′ - 50°13′ N. and 7°53′ - 9°30′ E., entitled:] (1) Karte des Anbaues der Walnuss im Grossherzogtum Hessen. Von E. Ihne. 6 colors. (2) — von Wein und Tabak —. —. 3 colors. (3) — der Zuckerrübe —. —. 3 colors. (4) — von Aprikose und Pfirsich —. —. 3 colors.

(b) Phänologische Karte des Frühlingseinzugs im Grossherzogtum Hessen. 2. neu bearbeitete Auflage, 1911. Von E. Ihne in Darmstadt. 50°50′ - 49°12′ N.; 7°45′ - 9°40′ E. 8 colors.

Accompany, as Pls. 24–27 and Pl. 28, respectively, "Neues aus der Pflanzenphänologie," by S. Günther, *Geogr. Anz.*, Vol. 13, 1912, No. 4, pp. 77–80.

[Map (b) shows, by areal colors for periods covering four days each, when spring begins in the area represented, the dates being based on the mean dates of inflorescence of certain characteristic plants. The value of phenological maps lies in their affording a more delicate index of climate than those based on meteorological observations alone. The use, on the above maps (which are extracted from a recent report by Prof. Ihne published by the agricultural bureau of Hessia),

of a political boundary for the representation of natural phenomena is unfortunate.]

POLAR

Arctic

Spitzbergen. (a) Carte du Spitsberg occidental indiquant la région levée par la mission norvégienne en 1912. [Mean scale 1:2,300,000]. 80° - 76⅓° N.; 11½° - 18⅓° E.

(b) Carte du réseau de trianguiation établi par le capitaine Staxrud et l'ingénieur Koller en 1911 et 1912 dans la presqu'île entre le Green Harbour et la Van Mijen Bay. [1:400,000]. [77⅚° N. and 15½° E.] Accompany, as Figs. 10 and 11 on pp. 101 and 103, respectively, "Résultats géneraux de l'expédition norvégienne au Spitsberg (1911–1912)," by A. Staxrud and A. Hoel, *La Géogr.*, Vol. 27, 1913, No. 2, pp. 99–108.

Antarctic

Antarctic. Itinéraire du Capitaine Scott au Pôle Sud. [1:8,000,000]. 90° - 81° S.; 110° W. - 110° E. Accompanies, as Fig. 9 on p. 95, "Le désastre de l'expedition Scott," by C. Rabot, *La Géogr.*, Vol. 27, 1913, No. 2, pp. 92–98.

WORLD AND LARGER PARTS

Atlantic Ocean. Der Atlantik während der letzten Kontinentalperiode. Nach Edward Hull zusammengestellt von H. Habenicht. 1:40,000,000. 72° N. - 15° S.; 120° W. - 48° E. 3 colors. Accompanies, as Pl. 71, "Die subozeanische Physiographie des Nordatlantischen Ozeans," by H. Habenicht, *Geogr. Anz.*, Vol. 13, 1912, No. 11, pp. 258–259.

[Shows the hypothetical extent of the circum-Atlantic continental area during the last period of uplift, together with the courses of submerged river valleys. *Atlantis* is interrogatively identified as an island, of which the platform on which the Azores now stand is the nucleus. The map is based on the maps in Edward Hull's "Monograph on the Sub-Oceanic Physiography of the North Atlantic Ocean," London, 1912. For the submarine channels of the North American coastal platform the adjective forms used on J. W. Spencer's map published in the same monograph have been retained, without correlating them, however, with their European equivalents. Thus, the Loire, Shannon, Rhine, are set against the "Cansan" (Gut of Canso Channel), "Fundian," "Narragansettan," etc.]

North Atlantic Ocean. Adolf Gadewohl: Die Stabilität der Meeresströmungen [im Nordatlantischen Ozean] südlich von 50° N-Br. [Four maps on Mercator's projection, equatorial scale 1:70,000,000 (51° N. - 0°; 85° W. - 15° E.; 1 color) entitled:] (1) September. (2) Oktober. (3) November. (4) Herbst. Accompany, as Taf 5, "Die Stabilität der Meeresströmungen im Nordatlantischen Ozean südlich 50° N-Br. im Herbst," by A. Gadewohl, *Ann. der Hydrogr.*, Vol. 41, 1913, No. 4, pp. 177–196.

[Valuable maps attempting to represent graphically the elements of importance connected with ocean currents. This is accomplished by indicating by means of an arrow the direction, the stability and velocity of the currents in each five degree 'square' during the period discussed, stability being represented by the length, velocity by the type of arrow used.]

South Atlantic Ocean. Lotungen vor der Küste von Brasilien zwischen 27° und 31° S-Br. ausgeführt von Kapt. Hans Roehl, D. "Troja," am 21. u. 22. Okt. 1912. [1:1,300,000]. 27°40′ - 30°45′ S.; 50°20′ - 47°25′ W. Accompanies "Lotungen vor der Küste von Brasilien," by H. Roehl, *Ann. der Hydrogr.*, Vol. 41, 1913, No. 4, p. 214.

[A series of new soundings supplementing those on British Admiralty chart No. 2522.]

World. Zonenkarte von Alex. Supan. [Mollweide's projection: scale 1:90,000,000]. 6 colors. Accompanies, as Pl. 31, "Die Zonenkarte," by A. Supan, *Geogr. Anz.*, Vol. 13, 1912, No. 5, pp. 99–100.

[Intended to supply a more rational division than the mathematical zones. The following latitude belts are distinguished: (1) 0° - 10°, equatorial; (2) 10° - 30°, Indian; (3) 30° - 46°, Mediterranean; (4) 46° - 55°, Central European; (5) 55° - 71°, North European; (6) 71° - 90°, Polar.]

World. Stand des Deutschen Seekartenwerkes 1911. [Mercator's projection; equatorial scale 1:77,000,000]. 7 colors. Accompanies, as Pl. 41, "Das deutsche Seekartenwerk, etc.," by G. Wegemann, *Geogr. Anz.*, Vol. 13, 1912, No. 6, pp. 121–124.

[Valuable index map showing the areas covered by the maps published by the German Hydrographic Office ("Nautisches Departement des Reichsmarineamts"). The maps are classified as to scale, the six groups established being distinguished by colors.]

EDUCATIONAL

World. (a) The World: Natural Regions. Mollweide's projection, equatorial scale 1:33,300,000. [Scale of projected globe, 1:30,000,000]. 22 colors. With two insets: (1) Density of Population. Mollweide's projection. [1:60,000,000]. 6 colors. (2) Occupations. Mollweide's projection. [1:60,000,000]. 5 colors. 1912.

(b) The World: Pressure & Winds. [Two parts:] (I) January. Mollweide's projection, equatorial scale 1:44,400,000 [scale of projected globe, 1:40,000,000]. 6 colors. With two insets: (1) [Northern Hemisphere]. Lambert's azimuthal equal area projection, scale of projected globe, 1:80,000,000. 5 colors. (2) [Southern Hemisphere]. Same projection and scale as (1). 4 colors. (II) July. Same projection and scale as (I). 6 colors. With two insets [Northern and Southern Hemispheres] on same projection and scale as (1) and (2) under (I). Each, 4 colors. 1911. In two sheets.

In series: Oxford Wall Maps. Edited by A. J. Herbertson. Drawn by B. V. Darbishire. Published by the Oxford University Press.

[Map (a) gives, in the bold style required by wall maps, Professor Herbertson's admirable division of the world into natural regions. Five different categories are distinguished, mainly according to climate. These are numbered as follows: (1) cold, (2) cool, (3) warm, (4) and (5) hot. These larger categories are further subdivided into five divisions, based mainly on physical features, which are each designated by a letter, *viz.:* (a) western margin, (b) eastern margin, (c) central lowland, (d) highland or plateau, (e) lofty mountains and plateaus. The combination of these elements leads to the establishment of 22 natural regions. These are given the following numerical designations and names:

(1a) Norway, (1b) Kamchatka, (1c) Tundra, (1d) Yukon, (1e) Greenland; (2a) Western Europe, (2b) St. Lawrence (Amuria), (2c) Siberia, (2d) Baikalia, (2e) Tibet; (3a) Mediterranean, (3b) China, (3c) Turan, (3d) Iran, (3e) Mongolia; (4a) Sahara, (4b) India, (4c) Sudan, (4d) East African Plateau, (4e) Quito; (5a) Amazon, (5b) Malay.

These names have been chosen according to the region where the constituent phenomena are most typical; they are by no means restricted to this region, however. Thus, Turan is duplicated by the Eastern Gobi and our own Great Plains; China by the United States east of the isohyetal of 20 inches, with the exception of the Appalachians; the Mediterranean by California; Western Europe by the North Pacific Coast from Oregon to Alaska, etc.

The inset showing density of population distinguishes between six grades of density per square mile, *viz.*, 0–1, 1–15, 15–75, 75–150, 15–300, and over 300. The inset showing occupations distinguishes between (1) hunters and fishers, (2) hunters and primitive cultivators, (3) herdsmen, (4) farmers, (5) manufacturers and farmers.

The pressure and wind maps listed under (b) show the isobars for every 4 millimeters of pressure between 760 and 784 mm. Winds are shown by arrows for three grades of the Beaufort scale, their constancy being indicated by the relative length of the arrows. Land areas over 2,000 meters high are shaded.

These maps are excellent examples of the felicitous products which result from a union of mastery of the subject and sound pedagogy.]